

REMARKS

Patentability Rejections

The Examiner rejected claims 1 – 13 under §103 as obvious over Rezaiifar (U.S. 6,467,270) in view of Cheng (U.S. 6,393,008). In rejecting claim 1, the Examiner asserts that Rezaiifar teaches every element of claim 1 except “releasing said supplemental channel if said packet data connection is inactive for a period that exceeds said duration value of said first timer while maintaining said connection with said fundamental frequency channel.” For this teaching, the Examiner relies on Cheng.

Claim 1 of the instant application teaches the allocation of fundamental and supplemental channel resources as part of establishing a specific wireless connection, such as a packet data connection, and further teaches the staged release of those resources if the connection becomes inactive, according to first and second timers. According to the claim, supplemental channel resources are released upon expiration of a first inactivity timer, while the fundamental channel resources are released later, upon expiration of a second, longer inactivity timer. As just one advantage, the time window between releasing the supplemental channel and releasing the fundamental channel provides a window of opportunity for the network to reactivate the data connection without incurring the signaling overhead that otherwise would be needed had the fundamental channel been torn down along with the supplemental channel.

Contrary to the Examiner’s assertions, neither Rezaiifar nor Cheng, alone or in combination, teach the limitations of claim 1. Rezaiifar teaches the use of one inactivity timer to simultaneously tear down the fundamental and supplemental channels of an inactive data connection. As such, as conceded by the Examiner, Rezaiifar does not teach releasing some portion of the traffic channel resources allocated to the wireless connection, such as the supplemental channels, upon the expiration of a timer.

Further, contrary to the Examiner’s assertions, Cheng teaches exactly the same thing as Rezaiifar, in that Cheng plainly shows the use of a single inactivity timer to tear down the

fundamental and supplemental channels of an inactive data connection at the same time. Cheng also teaches not tearing down the fundamental channel upon expiration of its inactivity timer, if that fundamental channel was pre-existing—e.g., if the fundamental channel was already assigned to the mobile station for supporting circuit-switched services at the time the supplemental channel was established for the data connection. In other words, Cheng teaches the use of one inactivity timer to tear down whatever channels were specifically established for the data connection. If both fundamental and supplemental channels were established specifically for the data connection, they are both torn down at the same time upon expiration of Cheng's one inactivity timer. If the fundamental channel was pre-existing, and thus not established for the data connection, it is not subject to any data connection inactivity timer—i.e., Cheng does not apply any data connection inactivity timer to the fundamental channel.

Because Rezaiifar and Cheng both teach the use of one inactivity timer to tear down all of the channel resources specifically established for a data connection, they cannot make the claimed invention's use of separate fundamental and supplemental channel inactivity timers obvious, whether Rezaiifar and Cheng are taken alone or together. Indeed, arguing for the combination of Rezaiifar and Cheng highlights another legal shortcoming of the examiner's obviousness rejection. Simply put, because Cheng teaches one inactivity timer to tear down all of the channel resources established for a given data connection, and because Rezaiifar teaches the identical use of a single inactivity timer, one skilled in the art would understand that the teachings of Cheng add nothing to the teachings of Rezaiifar. Therefore one skilled in the art would have no motivation to combine Cheng with Rezaiifar.

In summary, neither Rezaiifar nor Cheng, alone or in combination, teach allocating network resources, including a supplemental and a fundamental channel, to a specific connection, such as a packet data connection, and releasing the supplemental channel without releasing the fundamental channel upon the expiration of a first timer, as required by claim 1. As such, Rezaiifar and/or Cheng do not render claim 1 or dependent claims 2 – 4 obvious.

Independent claim 5 is an apparatus claim that corresponds to the method claim 1. As with claim 1, claim 5 requires the allocation of a fundamental and supplemental channel to establish or maintain a packet data connection, and the release of the supplemental channel without releasing the fundamental channel upon the expiration of a first timer. Therefore, for substantially the same reasons provided above, independent claim 5 and dependent claims 6 – 8 are non-obvious over Rezaiifar and Cheng.

Similarly, independent method claim 9 also requires allocating resources, including traffic channel resources, to a specific connection, releasing a portion of the traffic channel resources allocated to the connection upon expiration of a first timer, and releasing the remaining traffic channel resources allocated to the connection upon expiration of a second timer. Because Rezaiifar and Cheng both teach releasing all traffic channel resources allocated to a specific connection upon the expiration of a single timer, Rezaiifar and/or Cheng necessarily do not teach releasing only a portion of the allocated traffic channel resources allocated to the connection responsive to the expiration of a timer. Therefore, for substantially the same reasons provided above, independent claim 9 and dependent claims 10 – 13 are non-obvious over Rezaiifar and Cheng

Drawing Objections

The Examiner also objected to the drawings for failing to comply with §1.84(p)(4) because “reference characters ‘1, 2, 3, 4, 5, and 6’ have been used to designate signaling messages in Figure 4 and different signaling messages in Figures 3 and 5. Applicant still maintains that these numbers are not reference characters, and instead represent a sequential accounting of steps, as made clear by the corresponding text in the specification. However, to facilitate prosecution, Applicant amended the drawings and the corresponding text to reflect different step numbers for each figure. Specifically, the steps in Figure 3 are denoted as 1A, 2A, and 3A. Similarly, the steps in Figure 4 are denoted as 1B, 2B, 3B, 4B, 5B, and 6B, while

the steps in Figure 5 are denoted 1C, 2C, 3C, 4C, 5C, and 6C. In light of these amendments, Applicants respectfully request reconsideration of the drawing objection.

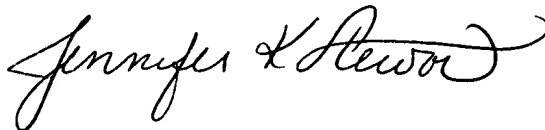
Conclusion

Based on the remarks provided above and the amendments included herein, Applicants submit that the application stands in condition for allowance. As such, Applicants respectfully request the Examiner reconsider the objection and rejections and allow the application to move forward to allowance. Should any issues remain unresolved, Applicant requests the Examiner call the undersigned so that any such issues may be resolved expeditiously.

Respectfully submitted,

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Date: 22 February 2005